

# BEST AVAILABLE COPY

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 61-280689

(43)Date of publication of application : 11.12.1986

(51)Int.Cl.

H01S 3/03

(21)Application number : 60-122178

(22)Date of filing : 05.06.1985

(71)Applicant : MITSUBISHI ELECTRIC CORP

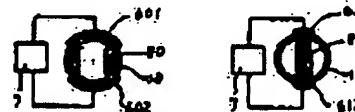
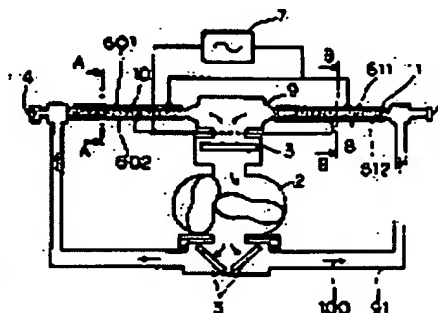
(72)Inventor : YASUI KIMIHARU  
TANAKA MASAOKI  
KUZUMOTO MASAKI  
OGAWA SHUJI

### (54) GAS LASER APPARATUS

#### (57)Abstract:

**PURPOSE:** To obtain a laser beam with a stable mode by composing a plurality of pairs of electrodes of a gas laser apparatus of at least two types of electrodes which have different widths.

**CONSTITUTION:** The width of a pair of electrodes 601 and 602 of a left side discharge tube 10 is made to be larger than the diameter of the discharge tube 10 and the width of a pair of electrodes 611 and 612 of a right side discharge tube 11 is made to be smaller than the diameter of the discharge tube 11. A discharge converged to the center is obtained in the right side discharge tube 11 and a discharge converged to both sides is obtained in the left side discharge tube 10. While the laser beam travels back and forth between a totally reflecting mirror 4 and a partially reflecting mirror 5, the effects of both discharges cancel each other. Therefore, this laser beam can be regarded as equivalent to the beam amplified by a homogeneous discharge 8 and the mode of the laser beam can be maintained stably.



### LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]